

ABSTRACT

The invention provides a method and apparatus for doing program analysis. According to embodiments of the invention program analysis comprises assigning an alias to each equivalence class of possibly overlapping memory accesses as defined by an alias analysis of an intermediate language program; and defining a definition-use relationship between statements in each equivalence class wherein definition statements which belong to the equivalence class reference the alias associated with that class, and wherein use statements which belong to the equivalence class reference the alias associated with for that class. The invention also provides a program analysis algorithm which utilizes a dependence flow graph having the property that the edge cardinality is independent of the definition-use of structure the program being analyzed.